

AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. APPLN. NO. 09/625,993
ATTY. DOCKET NO. Q60072

REMARKS

Applicant thanks the Examiner for indicating that the drawings filed on November 19, 2001 are accepted.

Applicant also thanks the Examiner for returning an initialed copy of the form PTO/SB/08 A & B (modified) (substitute for form PTO-1449) filed with the Information Disclosure Statement on February 27, 2002, indicating that the references therein have been considered by the Examiner.

Claims 1-5 and 9-18 are all the claims pending in the application.

Claim 10 is amended to improve the clarity with which the invention is claimed. Applicant notes that the Amendments to claim 10 are not made in response to the rejections described hereafter. Applicant notes further that the Amendments to claim 10 are not intended to either narrow or broaden the scope of the claim.

Claims 10 and 11 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for the reasons specified by the Examiner. Applicant respectfully traverses this rejection.

Regarding claim 10, the Examiner inquires whether the orthogonal surface is the structure splitting the wide tooth. Applicant responds that, yes, the orthogonal surface is the structure splitting the wide tooth. This is shown by reference character 224b in Fig. 7, and

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described in the last full paragraph on page 8 of the Application. Applicant respectfully asserts that claim 10 satisfies the definiteness requirement of 35 U.S.C. § 112.

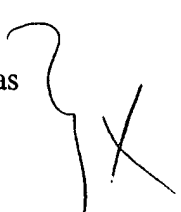
Regarding claim 11, the Examiner questions what alternates, the size of the interval (singular) or the air gaps (plural). The Examiner repeats this question from the Non-Final Office Action dated January 30, 2002. Applicant respectfully asserts that the verb tense of the word “alternates” is the verb tense applied to a singular subject. Given that the subject “a size of an interval” is singular and the subject “air gaps” is plural, Applicant asserts that the claim definitely recites that a size of an interval alternates as claimed. The word “alternates” is intended to have its standard dictionary definition of common words. It is not intended to have a specialized, unique or technical meaning. Applicant respectfully asserts that the use of this term in claim 11 is clear and definite and that the claim satisfies the definiteness requirement of 35 U.S.C. § 112.

For at least the foregoing reasons, Applicant respectfully requests that the rejection of claims 10 and 11 under 35 U.S.C. § 112, second paragraph, be withdrawn.

Claims 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang et al. (U.S. Patent No. 5,592,731) (hereinafter “Huang”) in view of Beard (U.S. Patent No. 2,502,121). Applicant respectfully traverses this rejection.

Claim 1 recites, “an annular shaped, single piece stator core . . .” (emphasis added). Applicant has emphasized previously that the claimed stator core is of a single piece, not

multiple pieces. Nevertheless, the Examiner persists in characterizing the claimed stator core as being “made of two pieces fixed together”. The Examiner concedes that Huang requires the stator core to be divided into at least two segments. *See* col. 6, lines 55-58. The Examiner appears to rely on Beard to overcome this deficiency in Huang. However, Beard also discloses a stator core divided into at least two segments. *See, e.g.*, Fig. 1. In other words, neither Beard nor Huang disclose a single piece stator core as claimed.



Furthermore, Claim 1 recites a “stator core . . . having . . . a first end surface and a second end surface fixed together to form said annular shape. . . .” Conversely, because the stator core of Huang is segmented into an indiscriminate number of separate parts, it cannot be formed as claimed. Rather, the stator core of Huang requires a thermal expansion technique to form an interference fit of the multiple segments. *See* col. 8, line 61 to col. 9, line 13, et. seq. Since Beard teaches two separate stator core segments, Beard shares this deficiency in Huang.

In order to establish a *prima facie* case of obviousness, the Examiner must show that the prior art teaches or suggests all of the claim limitations in the combination as claimed. *See* M.P.E.P. §2142, 3rd paragraph (case citations omitted); and M.P.E.P. § 2143.03 (case citations omitted). For either of the two above-described deficiencies shared by both Huang and Beard, Applicant respectfully submits that the Examiner has not set forth a *prima facie* case of obviousness, since the cited references do not teach or suggest each and every limitation recited in independent claim 1.

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For at least the foregoing reasons, Applicant respectfully requests that the rejection of claim 1 under 35 U.S.C. § 103(a) as being unpatentable over Huang in view of Beard be withdrawn.

Claim 2 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang and Beard, as applied to claim 1, and further in view of Maruyama et al. (U.S. Patent No. 6,194,800) (hereinafter "Maruyama"). Applicant respectfully traverses this rejection.

Claim 2 is allowable based at least on its dependence from Claim 1 for the reasons detailed above.

Further, Claim 2 recites, "an interval in the circumferential direction between a center of air gaps of adjacently formed slot opening portions is not the same." The Examiner correctly concedes that Huang and Beard do not disclose this limitation. In order to overcome this deficiency in Huang and Beard, the Examiner relies on Maruyama. However, Maruyama also fails to disclose this limitation.

Referring to Fig. 42 for example, Maruyama discloses air gaps of slot opening portions that have different widths, S_1 and S_2 . However, the interval in the circumferential direction between a center of air gaps of adjacently formed slot opening portions is the sum of interval α and interval β . Thus, though widths S_1 and S_2 alternate, and though intervals α and β alternate, the sum of intervals α and β is static. Thus, the interval in the circumferential direction between

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a center of air gaps of adjacently formed slot opening portions disclosed by Maruyama is static. It does not alternate as claimed. *See* col. 31, lines 2-27 and col. 32, line 44 to col. 33, line 1.

Therefore, Applicant respectfully submits that none of the references applied by the Examiner in this rejection of claim 2, whether taken alone or together, teach or suggest the combination as claimed.

Further, as previously stated, the Examiner must show that the prior art teaches or suggests all of the claim limitations in the combination as claimed in order to establish a *prima facie* case of obviousness. *See* M.P.E.P. §2142, 3rd paragraph (case citations omitted); and M.P.E.P. § 2143.03 (case citations omitted). Applicant respectfully submits that the Examiner has not set forth a *prima facie* case of obviousness, since the cited references do not teach or suggest the limitation recited in dependent claim 2.

For at least the foregoing reasons, Applicant respectfully requests that the rejection of claim 2 under 35 U.S.C. § 103(a) as being unpatentable over Huang and Beard, further in view of Maruyama, be withdrawn.

Claims 9-11 and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang in view of Beard and Muller (U.S. Patent No. 5,834,873). Applicant respectfully traverses this rejection.

Claim 9 recites that, “widths of said teeth . . . alternate in size. . . .” Conversely, Huang, and Beard all disclose teeth having uniform widths. Thus, the Examiner correctly concedes that

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neither Huang nor Beard disclose this limitation. In order to overcome this deficiency in Huang and Beard, the Examiner relies on Muller. However, Muller contains no disclosure whatsoever regarding the width of teeth. Rather, the width of the teeth disclosed in Muller are uniform, and, even if that were not the case, in no way does Muller contain a teaching or suggestion of any sort regarding the relative widths of teeth. Therefore, Applicant respectfully submits that Muller shares the deficiency in Huang and Beard conceded by the Examiner. Consequently, Applicant respectfully asserts that reliance on Muller to overcome a conceded deficiency in Huang and Beard regarding the width of teeth is misplaced.

As previously stated, the Examiner must show that the prior art teaches or suggests all of the claim limitations in the combination as claimed in order to establish a *prima facie* case of obviousness. See M.P.E.P. §2142, 3rd paragraph (case citations omitted); and M.P.E.P. § 2143.03 (case citations omitted). Applicant respectfully submits that the Examiner has not set forth a *prima facie* case of obviousness, since the cited references do not teach or suggest all of the limitations recited in claim 9. Therefore, Applicant asserts that the combination of Huang, Beard and Muller neither teaches or suggests the combination as claimed in independent claim 9.

Claims 10 and 11 are allowable based at least on their dependence from claim 9.

Claim 15 recites, “alternating said lengths of said projections.” The Examiner previously correctly conceded that Huang does not disclose this limitation. Although the Examiner does expressly state this concession, Applicant submits that it is also readily apparent that Beard

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shares this deficiency with Huang. In order to overcome this deficiency in Huang and Beard, the Examiner relies on Muller. The Examiner previously relied upon, and subsequently withdrew, Nitta and Burgbacher to overcome this deficiency. However, Applicant respectfully submits that, with respect to this limitation, Muller discloses the same thing as do Nitta and Burgbacher.

As the Applicant has previously noted in response to the Examiner's reliance on Nitta and Burgbacher with respect to this limitation, resulting in the Examiner's withdrawal of those references, so too with Muller the lengths of the projections of each consecutive pair of projections is uniform. In other words, insofar as the claimed alternating lengths of projections are concerned, Applicant asserts that Muller, merely teaches and suggests that which is also taught and suggested by Nitta and Burgbacher, previously applied and now withdrawn by the Examiner, namely, alternating pairs of projections, not alternating projections as claimed.

For at least the foregoing reasons, Applicant submits that the combination of Huang, Beard, and Muller (and Nitta, Burgbacher and the remaining prior art of record) neither teaches nor suggests the combination as claimed in Claim 15.

Therefore, Applicant requests that the rejection of Claims 9-11 and 15 under 35 U.S.C. § 103(a) as being unpatentable over Huang in view of Beard and Muller be withdrawn.

Claims 3-5, 12-14 and 16-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang, Beard, Muller and Maruyama as applied to claims 2, 11 and 15, and further in view of ordinary skill in the art. Applicant respectfully traverses this rejection. Claims 3-5, 12-14 and

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16-18 are allowable based at least on their dependence from claims 1, 2, 9, 11 and 15 for the reasons stated above. For at least the foregoing reasons, Applicant respectfully requests that the rejection of claims 3-5, 12-14 and 16-18 under 35 U.S.C. § 103(a) as being unpatentable over Huang, Beard, Muller and Maruyama, further in view of ordinary skill in the art, be withdrawn.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,



Mark R. Woodall
Registration No. 43,286

SUGHRUE MION, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, D.C. 20037-3213
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

Date: September 26, 2002

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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims are amended as follows:

10. (Amended) The stator for an automotive alternator according to Claim 9 wherein contact surfaces of said stator core[, when said stator core is connected as an annular shape,] are formed by [dividing] a wide tooth [among said teeth of alternating widths] divided [in a circumferential direction with a] by substantially orthogonal [surface] surfaces, said wide tooth being among said teeth of alternating widths.